

REMARKS

Claims 9, 27 and 29 have been amended to incorporate the features of Claims 10 and 11. Claims 10 and 11 have been cancelled.

Claim Objections

Claims 9, 27 and 29 have been amended in accordance with the Examiner's suggestions.

Claim Rejections – 35 U.S.C. § 102 and 35 U.S.C. §103

Claims 9, 27 and 29 have been amended to include the subject matter of Claims 10 and 11, thus obviating the 35 U.S.C. §102 rejections.

Applicants respectfully submit that Ishio does not disclose the step of "repeating the normalising and QPSK decoding steps for progressively smaller assumed amplitude levels to demodulate each said further data stream" as claimed in the independent claims.

Rather, Ishio discloses in the second embodiment that to demodulate the 64-ary APK signal the "four-phase modulated signals regenerated by the re-modulation circuits 21 and 29 are combined, the 16-ary APK signal shown in Figure 4 is derived. When the 64-ary APK signal... is subtracted vectorially from the regenerated 16-ary APK signal in the subtractor... the 4-PSK signal is obtained" (Column 4 lines 61 to 67) (emphasis added).

It would therefore be clear to one skilled in the art that to decode all the data present in the 64-ary APK signal the 16 APSK signal needs to be regenerated. In contrast, in the present invention, the 16-ary APK signal is not regenerated, rather successive normalisation and demodulation steps allow decoding of all the data streams contained within the signal without requiring regeneration of any part of the signal.

Applicants therefore respectfully submit that Claims 9, 27 and 29 would not have been obvious in view of Ishio in combination with any one of IEEE 802.11, Qiao, Schafer or Trachewsky because Ishio fails to disclose the step of repeating the normalising and decoding steps.

Furthermore, Ishio in Column 5 lines 15 to 16 states that "the third embodiment was made to overcome the defects" of "operations are adversely affected by the environmental conditions such as temperature change" (Column 6 lines 20 to 22 and 15 to 17 respectively).

Ishio then describes "threshold levels A and B extending horizontally and vertically through the terminus of the vector of the first path signal" allowing regeneration of one of the four pairs of the base band pulses and how "outputs independent of the phase of the carrier recovered by the carrier recovery circuit may be deried by modulo-4 addition of the Gray code by a logic circuit" (Column 5 line 56 to Column 6 line 4). In contrast IEEE 802.11 teaches that the modulation level of the signal should be varied according to the conditions.

Hence, Ishio teaches a different solution to the problem than that provided by IEEE 802.11. Therefore, one skilled in the art would not have any incentive to combine the teachings of any of the combinations of references because he would consider the problem as being solved by embodiment 3 of Ishio.

Applicants therefore submit that one skilled in the art would implement the third embodiment described in Ishio rather than introduce any of the features of IEEE 802.11 by varying the data streams modulation level.

Qiao, Schafer and Trachewsky all also teach varying the modulation level according to the conditions and therefore, would not be combined with Ishio for the reasons given above.

Applicants therefore respectfully submit that Claims 9, 27 and 29 would not have been obvious in view of the combinations listed by the Examiner.

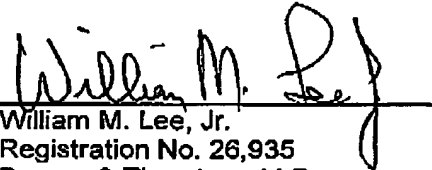
Applicants further submit that Claims 12 and 28 would not have been obvious at least by virtue of their dependencies.

This response is submitted within two months of the September 22, 2005 date of the Office Action.

Further and favorable reconsideration is urged.

November 14, 2005

Respectfully submitted,



William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)

CHDS01 WLEE 304476v1